RCHP-132US

Appln. No.: 10/521,994

Amendment Dated May 8, 2008

Reply to Office Action of December 13, 2007

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-16. (Canceled)

17. (Currently Amended) A process for preparing athe modified polyurethane <u>comprising a lipid substituent pendant from at least one urethane nitrogen and/or at least one carbon atom of the modified polyurethaneof-claim 1, the process comprising:</u>

providing a polyurethane comprising a urethane amino moiety and at least one carbon; providing a multifunctional linker reagent of a formula:

LG-R_L-(FG)_n

wherein n is an integer from 1 to 3, FG is a functional group selected from the group consisting of a halogen, a carboxyl group, a sulfonate ester, and an epoxy group, LG is a leaving group selected from the group consisting of a halogen, a carboxyl group, a sulfonate ester, and an epoxy group, and R_L is an (n+1)-valent organic radical comprising at least one carbon atom;

providing a lipid comprising the lipid substituent;

reacting the multifunctional linker reagent with the urethane amino moiety to form a polyurethane substituted with at least one substituent group of a formula

$$-R_L-(FG)_n$$
; and

reacting the lipid and the polyurethane substituted with the at least one substituent group to form the modified polyurethane;

wherein the lipid comprises a steroid lipid and the lipid substituent comprises a steroid lipid substituent;

wherein the steroid lipid comprises modified cholesterol and the steroid lipid substituent is a thiol-modified cholesterol substituent:

wherein the modified cholesterol is prepared by contacting a cholesterol with at least one reactant to provide at least one substituent group on the modified cholesterol, wherein the substituent group is a thiol group; and

wherein the modified cholesterol is a thiol modified cholesterol and wherein the step of treating the cholesterol with at least one reactant comprises treating the cholesterol with epihalohydrin to yield a glycidyl modified cholesterol and treating the glycidyl modified cholesterol with a thiolating agent.

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18. (Previously Presented) The process of claim 17, wherein R_L is a bivalent organic radical selected from the group consisting of C_1 to C_{18} alkylene, C_1 to C_{18} alkyleneamino, C_1 to C_{18} alkyleneoxy, C_1 to C_{18} alkoalkylene, C_2 to C_{18} alkenylene, C_6 to C_{18} arylene, a modified C_2 to C_{18} alkenylene having at least one carbon substituted by a halogen group, C_2 to C_{18} alkenylene having one or more O, S, or N atoms incorporated into an alkenylene chain, a bivalent heterocyclic radical, and mixtures thereof.

19. (Previously Presented) The process of claim 18, wherein the multifunctional linker reagent is a member selected from the group consisting of a dibromoalkyl compound, a bromo-carboxyalkyl compound, and a bromo-epoxyalkyl compound.

20-21. (Canceled)

22. (Currently Amended) The process of claim 1721, wherein the modified cholesterol comprises 3-mercapto-2-hydroxypropyl-cholesterol.

23-24. (Canceled)

25. (Currently Amended) A process for preparing athe modified polyurethane comprising a lipid substituent pendant from at least one urethane nitrogen and/or at least one carbon atom of the modified polyurethane of claim 1, the process comprising:

reacting a steroid lipid with epihalohydrin to yield a glycidyl derivative of the steroid lipid;

reacting the glycidyl derivative of the steroid lipid with a thiolating agent, thereby effecting opening of the glycidyl oxirane group and adding to said lipid molecule a thiol molety having a protective group bound thereto;

removing said protecting group to produce a thiol-substituted steroid lipid; reacting a polyurethane with a bi-functional linker comprising a thiol-reactive group, to yield an intermediate polyurethane having a thiol-reactive functional group wherein the thiol-reactive functional group is substituted on said urethane group nitrogen; and

reacting the thiol-substituted steroid lipid with the intermediate polyurethane having a thiol-reactive functional group to yield the modified polyurethane.

26. (Previously Presented) The process of claim 25, wherein the epihalohydrin is epibromohydrin.

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- 27. (Previously Presented) The process of claim 25, wherein the thiolating agent is selected from the group consisting of thiosulfate, thiourea, trityl mercaptan, tert-butyl mercaptan, thiocyanate, and thioalkanoic acids having 2-6 carbon atoms.
- 28. (Previously Presented) The process of claim 27, wherein the thiolating agent is thioacetic acid.
- 29. (Previously Presented) The process of claim 25, wherein the bi-functional linker is a dihaloalkane having 1-12 carbon atoms.
- 30. (Previously Presented) The process of claim 29, wherein the bi-functional linker is 1,4-dibromobutane.
- 31-40. (Canceled)